

THE CLAIMS DEFINING THE INVENTION ARE:

1. Hogger apparatus comprising:
 - a drum inclined to the horizontal, being substantially open at the upper end to allow the feed of raw material therein, and
 - including a rotating reducing means within and proximate the lower end of the drum, said reducing means bearing a plurality of features which interact and reduce the size of raw material with which it comes into contact;the arrangement being further characterised in that at least a portion of the drum exhibits a plurality of apertures acting as screening apertures to allow processed material of sufficiently reduced size to pass therethrough.
2. Hogger apparatus as claimed in claim 1 in which the drum is rotatable.
3. Hogger apparatus as claimed in claim 2 in which rotation of the drum may be stopped while processing of raw material proceeds.
4. Hogger apparatus as claimed in any one of claims 1 through 3 in which the reducing means is substantially a disc in shape.
5. Hogger apparatus as claimed in claim 4 in which the rotational axis of the disc is angled, when the apparatus is viewed in top plan, at an angle to the longitudinal axis of the drum.
6. Hogger apparatus as claimed in claim 5 in which the angle of the disc's rotational axis relative to the drum's longitudinal axis, when viewed in plan, is within the inclusive range of 5°-75°.
7. Hogger apparatus as claimed in claim 5 in which the angle of the disc's rotational axis relative to the drum's longitudinal axis, when viewed in plan, is within the inclusive range of 25°-45°.
8. Hogger apparatus as claimed in any one of claims 4 through 7 in which the rotational axis of the disc is angled, when the apparatus is viewed from the front, at an angle to the longitudinal axis of the drum.

9. Hogger apparatus as claimed in claim 8 in which the angle of the disc's rotational axis relative to the drum's longitudinal axis, when viewed from the front, is within the inclusive range of 5°-75°.
10. Hogger apparatus as claimed in claim 8 in which the angle of the disc's rotational axis relative to the drum's longitudinal axis, when viewed from the front, is within the inclusive range of 25°-45°.
11. Hogger apparatus as claimed in any one of claims 8 through 10 in which the angle of the disc's rotational axis relative to the drum's longitudinal axis, when viewed from the front, is downward from the longitudinal axis when travelling from the end of the drum where the disc is located and towards the alternate feed end of the drum.
12. Hogger apparatus as claimed in any one of claims 4 through 11 in which the disc rotates in a direction opposite the direction of rotation of the drum.
13. Hogger apparatus as claimed in either claim 11 or 12 in which, when viewed from an end of the drum, the disc is offset with respect to the longitudinal axis of the drum.
14. Hogger apparatus as claimed in claim 13 in which, when viewed from the end of the drum, the disc is offset to the left or right with respect to the longitudinal axis of the drum.
15. Hogger apparatus as claimed in any one of the preceding claims in which the features on the reducing assembly for reducing the raw material are teeth.
16. Hogger apparatus as claimed in claim 15 in which the teeth are replaceable.
17. Hogger apparatus as claimed in any one of the preceding claims in which the drum is substantially cylindrical
18. Hogger apparatus as claimed in claim 17 in which the drum is of substantially constant diameter along its length.

19. Hogger apparatus as claimed in any one of the preceding claims in which the screening apertures are present over substantially the entire outer surface of the drum, at least between the reducing means and the feed end of the drum.
20. Hogger apparatus as claimed in claim 19 in which the screening apertures are provided by replaceable screen sections attached to a framework of the drum.
21. Hogger apparatus as claimed in any one of the preceding claims in which differently sized screening apertures are provided on the drum.
22. Hogger apparatus as claimed in any one of the preceding claims , in which the drum is divided into at least two sections, with an inwardly directed flange extending from the inner wall of the drum defining the boundary between different adjacent sections.
23. Hogger apparatus as claimed in claim 22 in which a first of said two sections adjacent the feed end of the drum is a cleaning section, and the other section, in which the reducing means is present, is a processing section for the reduction of introduced material; the inward flange acting as a barrier affecting the passage of small material from the first to the second processing section.
24. Hogger apparatus as claimed in claim 23 in which said small material is typically stones, dirt, and foreign material.
25. Hogger apparatus as claimed in claim 23 or claim 24 in which the cleaning section pre-screens introduced raw material from the feed end to separate stones, dirt, and foreign material therefrom.
26. Hogger apparatus as claimed in any one of claims 23 through 25 in which screening apertures are present on the drum in the first cleaning section, the size of screening apertures on the cleaning section being smaller than the average size of those present on the processing section.
27. Hogger apparatus as claimed in any one of claims 23 through 26 in which the cleaning section includes one or more agitating means.

28. Hogger apparatus as claimed in claim 27 in which the configuration and operation of the agitating means is such to knock or wipe small foreign material from bulk introduced raw material in the cleaning section.
29. Hogger apparatus as claimed in any one of claims 23 through 28 in which there is external wiping or brushing means for assisting the clearing and unblocking of foreign material from the screening apertures.
30. Hogger apparatus as claimed in any one of the preceding claims in which there is provided, adjacent the internal face of the drum, at least one rotating agitator to increase turbulence of the bulk raw and processed material in its vicinity.
31. Hogger apparatus as claimed in claim 30 in which the rotating agitator is configured and operated to enhance screening efficiency by varying the position and/or orientation of bulk material with which it interacts.
32. Hogger apparatus as claimed in either claim 30 or claim 31 in which a rotating agitator is basically a rotating shaft with a screw blade thereabout.
33. Hogger apparatus as claimed in claim 32 in which the shaft with screw blade is rotated such that the screw blade will attempt to push bulk material towards the feed end of the drum.
34. Hogger apparatus as claimed in either claim 30 or claim 31, in which a rotating agitator comprises a shaft with paddles or blades mounted or formed thereon.
35. Hogger apparatus as claimed in any one of the preceding claims in which there is also provided at least one motive means for rotating the drum and reducing means.
36. Hogger apparatus as claimed in claim 35 in which the motive means is a hydraulic motor.
37. Hogger apparatus as claimed in claim 36 in which the pump for the hydraulic motor is powered by a combustion engine.
38. Hogger apparatus as claimed in claim 35 in which the motive means is a hydraulic motor.

39. Hogger apparatus as claimed in either claim 37 or claim 38 in which the exhaust from the combustion engine is vented into the interior of the drum to heat, and partially dry, introduced raw material.
40. Hogger apparatus as claimed in claim 39 in which the exhaust is introduced by a pipe with venting apertures therein, which extends along at least part of the length of the drum.
41. Hogger apparatus as claimed in either claim 39 or claim 40 in which a significant proportion of exhaust is vented into the drum near the feed end thereof.
42. Hogger apparatus as claimed in any one of the preceding claims in which there is an associated feed mechanism for delivering raw material into the drum.
43. Hogger apparatus as claimed in claim 42 in which the feed mechanism is a conveyer arrangement.
44. Hogger apparatus as claimed in any one of the preceding claims which includes clearing means for transporting screened material away from the apparatus.
45. Hogger apparatus as claimed in claim 44 in which the clearing means comprises conveying means able to deliver transported material into a hopper, trailer, or storage area.
46. Hogger apparatus as claimed in either claim 44 or claim 45 which includes both conveying feed means for introducing raw material into the drum, and clearing means; the conveying feed means positioned to be substantially over lower clearing means.
47. Hogger apparatus as claimed in any one of the preceding claims in which the raw material is predominantly wood based.
48. Hogger apparatus as claimed in any one claims 1 through 46 in which the raw material is predominantly one or more of the following: demolition timber, demolition masonry, mild steel scrap (thin sections), soft metal scrap, recycled cans, recycled glass, recycled plastic, soft rocks, occasionally hard rocks, recycled roading and asphalt, old tyres, green garden waste.

49. Hogger apparatus as claimed in any one of the preceding claims which is mounted on to a trailer or vehicle.